

LISTING OF THE CLAIMS

1. (Previously presented) A method of intraluminally positioning an elongate treatment device proximate to a junction in a hollow anatomical structure comprising veins of a patient, the method comprising the steps of:

introducing the treatment device into the hollow anatomical structure, the treatment device comprising an elongate shaft and an electrically driven energy application device at a working end of the shaft;

identifying the junction where two veins intersect in the hollow anatomical structure by emitting light via a fiber optic device positioned in the hollow anatomical structure;

positioning the working end of the treatment device proximate the junction identified in the step of identifying;

applying energy to one of the veins in the hollow anatomical structure proximate the junction via the energy application device so as to reduce the diameter of that vein in the hollow anatomical structure.

2. (Original) The method of claim 1 wherein the junction in the step of identifying is the sapheno-femoral junction.

3. (Previously Presented) The method of claim 1 wherein an attribute of the light changes upon the fiber optic device reaching the junction of the hollow anatomical structure.

4. (Previously Presented) The method of claim 1 wherein the step of introducing the treatment device further includes the step of introducing the treatment device over the fiber optic device.

5. (Original) The method of claim 3 further including the step of measuring the length of the fiber optic device introduced into the patient until the attribute of the light changes.

6. (Original) The method of claim 5 further including the step of removing the fiber optic device after the step of measuring.

7. (Previously Presented) The method of claim 5 wherein the step of positioning further includes the step of inserting the treatment device for the same length as measured in the step of measuring the length of the fiber optic device.

8-15. (Canceled)

16. (Previously Presented) The method of claim 1 wherein introducing said treatment device comprises introducing said treatment device over a guidewire with a hook shaped tip located at the distal end of a guide wire, and the hook shaped tip is adaptable to engage the junction of the hollow anatomical structure while the treatment device travels over the guidewire to the junction.

17-20. (Canceled)

21. (Previously Presented) The method of claim 1 wherein the step of introducing the treatment device further includes the step of introducing the treatment device over a guide wire.

22-49. (Canceled)

50. (Previously Presented) A method of positioning a catheter within a hollow anatomical structure, the method comprising the steps of:

introducing a guide wire having a hook-shaped tip into the hollow anatomical structure;

hooking the hook-shaped tip of the guide wire to an ostium of a junction within the hollow anatomical structure;

introducing a catheter having a working end into the hollow anatomical structure over the guide wire;

positioning the working end of the catheter proximate the junction identified in the step of hooking; and

applying energy to the hollow anatomical structure at the treatment site via an energy application device at the working end of the catheter to heat but not cut the hollow anatomical structure until the hollow anatomical structure durably assumes a smaller size such that the reduced diameter of the hollow anatomical structure effectively ligates the hollow anatomical structure.

51. (Original) The method of claim 50 wherein the junction in the step of hooking is the sapheno-femoral junction.

52. (Original) The method of claim 50 wherein the step of positioning further includes the step of stopping the advancement of the catheter by a mechanical stop located proximal to the hook shaped tip of the guide wire.

53. (Original) The method of claim 50 further comprising the step of measuring the length of the guide wire introduced into the patient in the step of hooking.

54–69. (Canceled)

70. (Previously Presented) The method of claim 1 wherein the step of applying energy heats but does not cut the vein, and wherein the reduced diameter of the vein results in occlusion of the vein.

71. (Previously Presented) The method of claim 1, wherein applying energy to one of the veins in the hollow anatomical structure effectively ligates that vein.

72. (Previously Presented) The method of claim 1 wherein the reduced diameter of the vein results in occlusion of the vein.

73–74. (Canceled)

75. (Previously Presented) The method of claim 1, wherein the energy application device comprises a plurality of electrodes.

76. (Previously Presented) The method of claim 1, wherein the energy application device comprises a resistive coil.

77. (Previously Presented) The method of claim 1, wherein the fiber optic device is an integrated part of the treatment device.

78. (Previously Presented) A method of positioning a device for intraluminal application of therapeutic energy to a target portion of a hollow anatomical structure, the method comprising:

emitting light from a light source within a hollow anatomical structure having first and second lumina;

monitoring the light from outside the hollow anatomical structure to determine information about the location of a junction between a target portion and a nontarget portion of the hollow anatomical structure;

introducing a catheter having a working end into the first lumen of the hollow anatomical structure, the catheter having a therapeutic energy device at the working end, the therapeutic energy device being distinct from the light source;

using the information to position the therapeutic energy device in the target portion in the first lumen near the junction; and

applying energy from the therapeutic energy device to the target portion in the first lumen of the hollow anatomical structure, thereby shrinking the target portion of the hollow anatomical structure.

79. (Previously Presented) The method of claim 78, wherein the therapeutic energy device is positioned separately from the light source.

80. (Previously Presented) The method of claim 78, further comprising the step of expanding the therapeutic energy device to provide physical engagement with the hollow anatomical structure.

81. (Previously Presented) The method of claim 80, wherein the step of expanding occurs after the step of using the information to position the therapeutic energy device.

82. (Previously Presented) The method of claim 78, wherein the hollow anatomical structure comprises a blood vessel.

83. (Previously Presented) The method of claim 78, wherein the hollow anatomical structure is the great saphenous vein, the sapheno-femoral junction, and the femoral vein.

84. (Previously Presented) The method of claim 78, wherein the target portion is the great saphenous vein.

85. (Previously Presented) The method of claim 78, wherein the light source is a fiber optic device.

86. (Previously Presented) The method of claim 85, wherein the fiber optic device is configured to emit light in a radial fashion.

87. (Previously Presented) The method of claim 78, wherein the therapeutic energy device is an electrode device.

88. (Previously Presented) The method of claim 78, wherein the catheter includes the light source.

89. (Previously Presented) A method of positioning a device for application of therapeutic energy to a target portion of a system of two blood vessels, the method comprising:

emitting visual feedback light from a visual feedback device positioned within a the system of two blood vessels;

monitoring the visual feedback light from outside the system of two blood vessels to determine information about the location of a junction between a target portion and a non-target portion of the system of two blood vessels;

introducing, into the first vessel, a catheter having a therapeutic energy device at the catheter's working end, the therapeutic energy device distinct from the visual feedback device;

using the information to position the therapeutic energy device near the junction and prevent the therapeutic energy device from extending into the non-target portion; and

shrinking the target portion of the system of two blood vessels by applying energy from the therapeutic energy device to the target portion.

90. (Previously Presented) The method of claim 89, wherein therapeutic energy device is positioned separately from the visual feedback device.

91. (Previously Presented) The method of claim 89, wherein the target portion is in the saphenous vein.

92. (Previously Presented) The method of claim 89, wherein the non-target portion is the femoral vein.

93. (Previously Presented) The method of claim 89, wherein the visual feedback device is configured to emit light in a radial fashion.

94. (Previously Presented) The method of claim 89, wherein the catheter comprises the visual feedback device.

95. (Previously Presented) The method of claim 89, wherein the therapeutic energy device comprises a resistive coil.

96. (Previously Presented) The method of claim 78, wherein the therapeutic energy device is a resistive coil.

97. (Previously Presented) The method of claim 88, wherein the light source is combined as part of the working end of the catheter.